

# ***Bolens***<sup>®</sup>

**Tractor (HT23)  
23 HP**

**PARTS LIST**

**Model 2389**

Serial Number

0100101 thru

0299999

**Model 2389S**

Serial Number

0100101 thru

**MYTRACTORFORUM.COM**

# BOLENS HT-23 TRACTOR

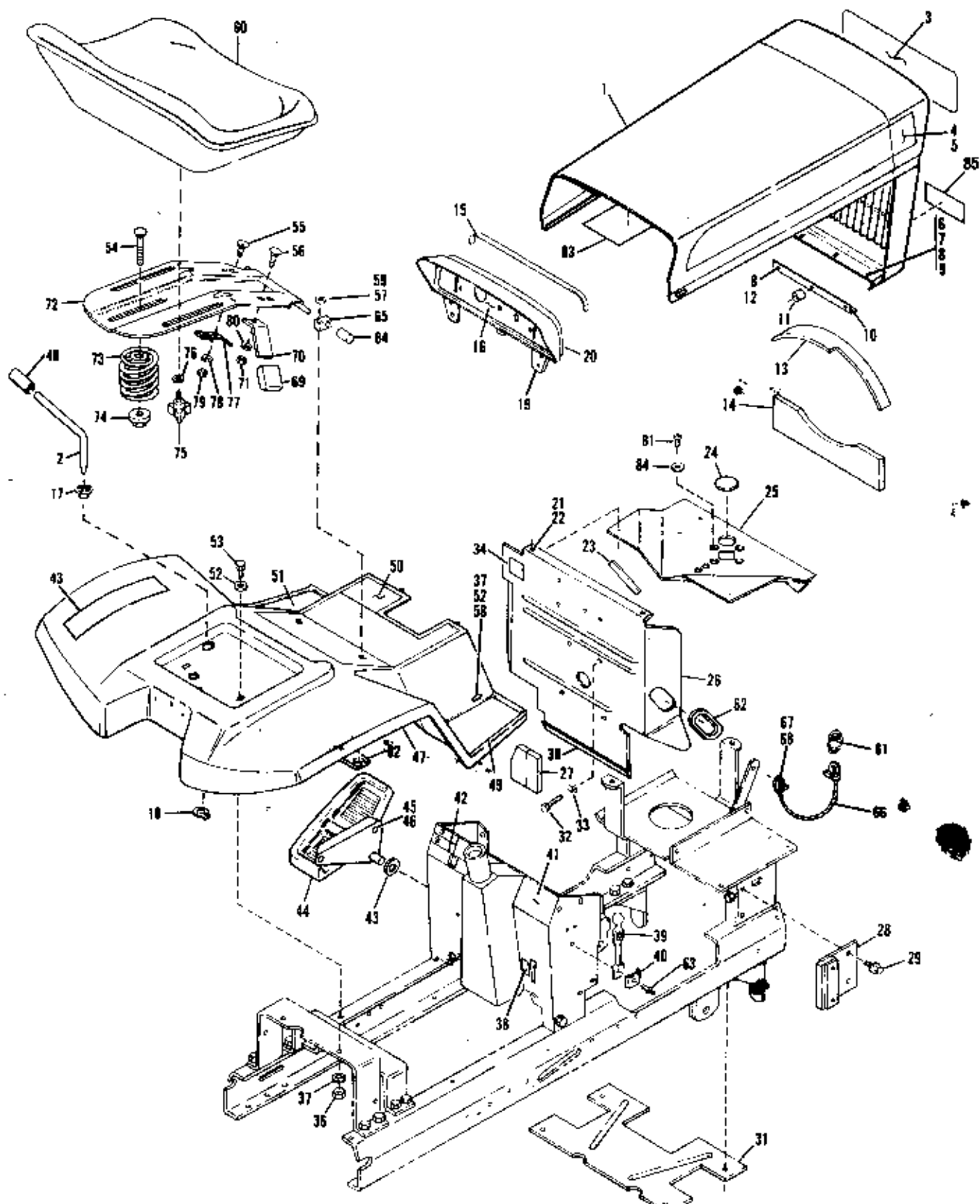


Figure 1 TRIM ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	1727279	Grille and Hood w/o		42	1736297	Decal, Hydraulic Control . . .	1
		Decals (1)(2) . . . . .	1	43	1736270	2 Speed Decal. . . . .	1
	1750422	Grille and Hood w/o		44	1724522	Foot Pedal, Left Hand . . . .	1
		Decals (3) . . . . .	1	45	1177548	Lockwasher, 5/16 . . . . .	2
2	1738882	Shift Lever. . . . .	1	46	1103195	Capscrew, 5/16-18 x 5/8. . . .	2
3	1749857	Decal, Grille . . . . .	1	47	1736014	Rear Fender . . . . .	1
4	1749840	Decal, Hood, Right Hand . . .	1	48	1736271	Handle Grip . . . . .	1
5	1749839	Decal, Hood, Left Hand . . .	1	49	1719183	Foot Pad, Right Hand . . . .	1
6	1103195	Capscrew, 5/16-18 x 5/8. . . .	3	50	1737119	Decal, Instructions. . . . .	1
7	1107382	Flat Washer, 5/16 . . . . .	3	51	1719182	Foot Pad, Left Hand . . . .	1
8	1100242	Lockwasher, 5/16 . . . . .	6	52	1107383	Flat Washer, 3/8 . . . . .	4
9	1186230	Nut, 5/16-18 . . . . .	3	53	1100046	Capscrew, 3/8-16 x 1 . . . . .	2
10	1717246	Hinge . . . . .	1	54	1186130	Carriage Bolt, 3/8-16 x 1-1/4	1
11	1722833	Spacer. . . . .	3	55	1186087	Carriage Bolt, 1/4-20 x 1/2 .	1
12	1100779	Capscrew, 5/16-18 x 1-3/4 . .	3	56	1186098	Round Hd Bolt, 5/16-18 x	
13	1726054	Heat Shield . . . . .	1			3/4 (1) . . . . .	1
14	1726055	Heat Shield . . . . .	1	57	1100242	Lockwasher . . . . .	2
15	1717599	Rubber Pad . . . . .	1	58	1103212	Capscrew, 3/8-16 x 5/8. . . .	2
16	1737121	Decal, Instructions. . . . .	1	59	1100808	Capscrew, 5/16-18 x 1-1/4 .	2
	1749863	Decal, Instructions (3) . . . .	1	60	1746380	Seat (1)(2) . . . . .	1
17	1735131	Grommet. . . . .	1		1748757	Seat (3) . . . . .	1
18	1735132	Grip Ring. . . . .	1	61	1727269	Spring . . . . .	1
19	1186389	Nut, Flange, 1/4-20 . . . . .	5	62	1726554	Trim, Cover . . . . .	1
20	1733054	Instrument Panel (1)(2) . . . .	1	63	1728772	Pop Rivet, 3/16. . . . .	2
	1749862	Instrument Panel (3) . . . . .	1	64	1734898	Plastic Grip (1) . . . . .	2
21	1186308	Flange Lock Capscrew,		65	1735265	Pivot Block . . . . .	2
		1/4-20 x 1/2 . . . . .	2	66	1727268	Lanyard . . . . .	1
22	1186389	Flange Lock Nut, 1/4-20. . . .	2	67	1100805	Capscrew, 1/4-20 x 3/4. . . .	1
23	1726129	Deflector, Air. . . . .	1	68	1110106	Nut, 1/4-20 . . . . .	1
24	1718180	Plug, Button. . . . .	1	69	1735054	Handle Grip (1). . . . .	1
25	1738205	Heat Shield . . . . .	1	70	1735517	Seat Support Stand (1). . . .	1
26	1734638	Heat Shield Assembly. . . . .	1	71	1110107	Locknut, 5/16-18 (1). . . . .	1
27	1726415	Heat Shield . . . . .	1	72	1734115	Seat Support Assy. . . . .	1
28	1726090	Heat Shield Assembly. . . . .	2	73	1733960	Spring . . . . .	1
29	1724492	Flange-Lock Screw,		74	1735125	Nut and Washer. . . . .	1
		1/4-20 x 1/2 . . . . .	4	75	1734269	Seat Knob . . . . .	2
30	1730248	Wear Strip . . . . .	1	76	1100256	Flat Washer, 3/8 . . . . .	2
31	1733473	Deflector, Air. . . . .	1	77	1734637	Actuator Bracket. . . . .	1
32	1100051	Screw, Cap, 7/16-14 x 1-1/2	4	78	1100241	Lockwasher, 1/4 . . . . .	1
33	1100244	Lockwasher, 7/16 . . . . .	4	79	1186229	Hex Nut, 1/4-20 . . . . .	1
34	1751085	Decal, Hot Surface. . . . .	1	80	1705905	Bowed Washer (1) . . . . .	1
35	1734393	Reinforcing Strap . . . . .	1	81	1114838	Phil. Hd. Screw No. 10-32 x	
36	1186231	Nut, 3/8-16 . . . . .	2			5/16 . . . . .	4
37	1100243	Lockwasher, 3/8 . . . . .	4	82	1734393	Reinforcing Plate. . . . .	1
38	1736295	Decal, PTO. . . . .	1	83	1745881	Service Inst. (1)(2) . . . . .	1
39	1727127	Latch . . . . .	2		1748718	Service Inst. (3) . . . . .	1
40	1727126	Clip . . . . .	2	84	1187949	Shakeproof Washer No. 10 .	4
41	1751062	Decal, Caution . . . . .	1	85	1749847	Decal (3) . . . . .	1

• Common Hardware - Purchase Locally (Grade 5 where applicable)

Model 2389

(1) Serial Number 0100101 thru 0199999

(2) Serial Number 0200101 thru 0299999

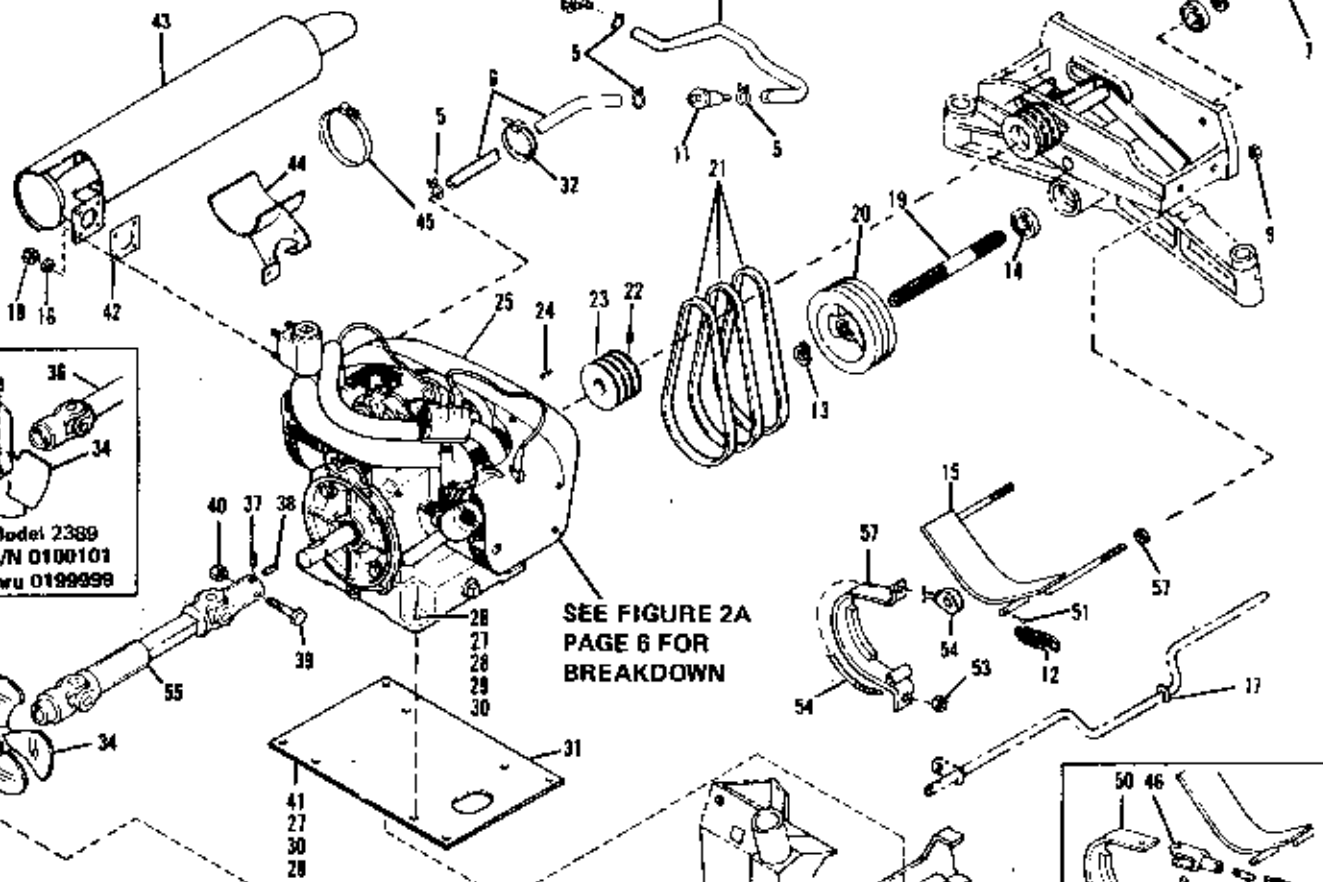
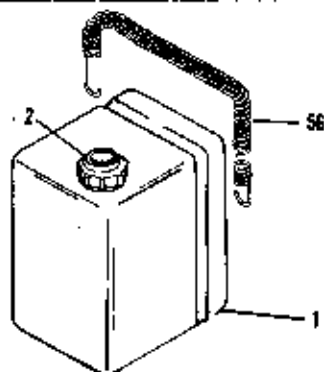
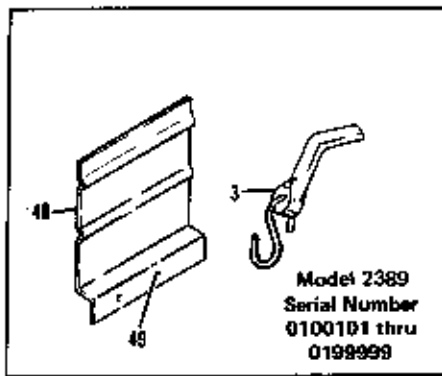
Model 2389S

(2) Serial Number 01001C

(3) Serial Number 02001C

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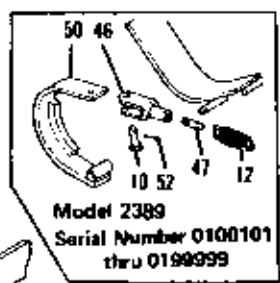
# BOLENS HT-23 TRACTOR



SEE FIGURE 2A  
PAGE 6 FOR  
BREAKDOWN

SEE FIGURE 3, PAGE 10  
FOR BREAKDOWN

SEE FIGURE 3, PAGE 10  
FOR BREAKDOWN



REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	1735066	Gas Tank (Incl. Ref. No. 2)	1	33	1104436	Woodruff Key	1
2	1727340	Fuel Gauge	1	34	1736067	Fan (1)	1
3	1727577	Strap (1)	1		1738427	Fan (2)	1
4	1734532	Shut Off Valve (1)	1	35	1100113	Set Screw, 1/4-20 x 1/2 (1)	1
	1718029	Shut Off Valve (2)	1		1738814	Set Screw, 5/16-18 x 1-1/4 (2)	1
5	1718185	Hose Clamp	4	36	1732183	Drive Shaft (1)	1
6	1734389	Fuel Line	2		1724401	Drive Shaft Repair Kit (Rockwell or Weasler)	2
7	1723790	Universal Joint	1		1714208	Drive Shaft Repair Kit (NEAPCO)	2
8	1723474	Hose Clamp	1	37	1182554	Set Screw, 5/16-18 x 5/16	1
9	• 1186231	Hex Nut, 3/8-16	4	38	1108844	Square Key, 1/4 x 1-1/4	1
10	1734998	Clevis Pin (1)	1	39	• 1111608	Capscrew, 5/16-18 x 2-1/2	1
11	1727491	Filter	1	40	• 1110107	Lock Nut, 5/16-18	1
12	1723117	Ext. Spring	1	41	• 1100055	Capscrew, 1/2-13 x 1-1/4	4
13	1185689	Retaining Ring	2	42	1722530	Gasket, Exhaust	1
14	1185100	Ball Bearing	2	43	1735230	Exhaust Muffler	1
15	1733484	Belt Guide Assembly	1	44	1722533	Support, Muffler	1
16	• 1100242	Lockwasher, 5/16	4	45	1723599	Snaplock Hose Clamp	1
17	1725197	Grip Ring	1	46	1710583	Rod End (1)	1
18	• 1196230	Nut, 5/16-18	6	47	1721515	Stud Adjusting (1)	1
19	1736353	PTO Shaft	1	48	1728838	Baffle (1)	1
20	1733475	PTO Sheave	1	49	1724492	Screw, Self Tapping	1
21	1722639	Drive Belt 3" (Matched Set Of 3)	1	50	1733479	Band Assy., Brake (1)	1
22	1741846	Set Screw, 5/16-18 x 1/2	2	51	• 1185147	Cotter Pin, 3/32 x 5/8	1
23	1722662	Drive Sheave	1	52	• 1100347	Cotter Pin, 1/8 x 1/2 (1)	1
24	1108844	Square Key, 1/4 x 1-1/4	1	53	• 1110106	Lock Nut, 1/4-20 (2)	1
25	*	Kohler K582 S Spec 36272A Engine (2389)	1	54	1738657	PTO Brake Cable (2)	1
	*	Kohler K582 S Spec 36328 Engine (2389S)	1	55	1740006	Drive Shaft (2)	1
26	• 1100065	Capscrew, 1/2-13 x 1-3/4	4		1724401	Drive Shaft Repair Kit (Weasler) (2)	2
27	• 1100245	Lockwasher, 1/2	8	56	1737149	Extension Spring (2)	1
28	• 1107385	Flat Washer, 1/2	8	57	1738655	Brake Band Assy. (2)	1
29	• 1103997	Lockwasher, 1/2 External	4				
30	• 1186233	Nut, 1/2-13	8				
31	1722559	Engine Support	1				
32	1805345	Tie	2				

\* Common Hardware - Purchase Locally

#### Model 2389S

(2) Serial Number 0100101 thru 0499999

#### Model 2389

(1) Serial Number 0100101 thru 0199999

(2) Serial Number 0200101 thru 0299999

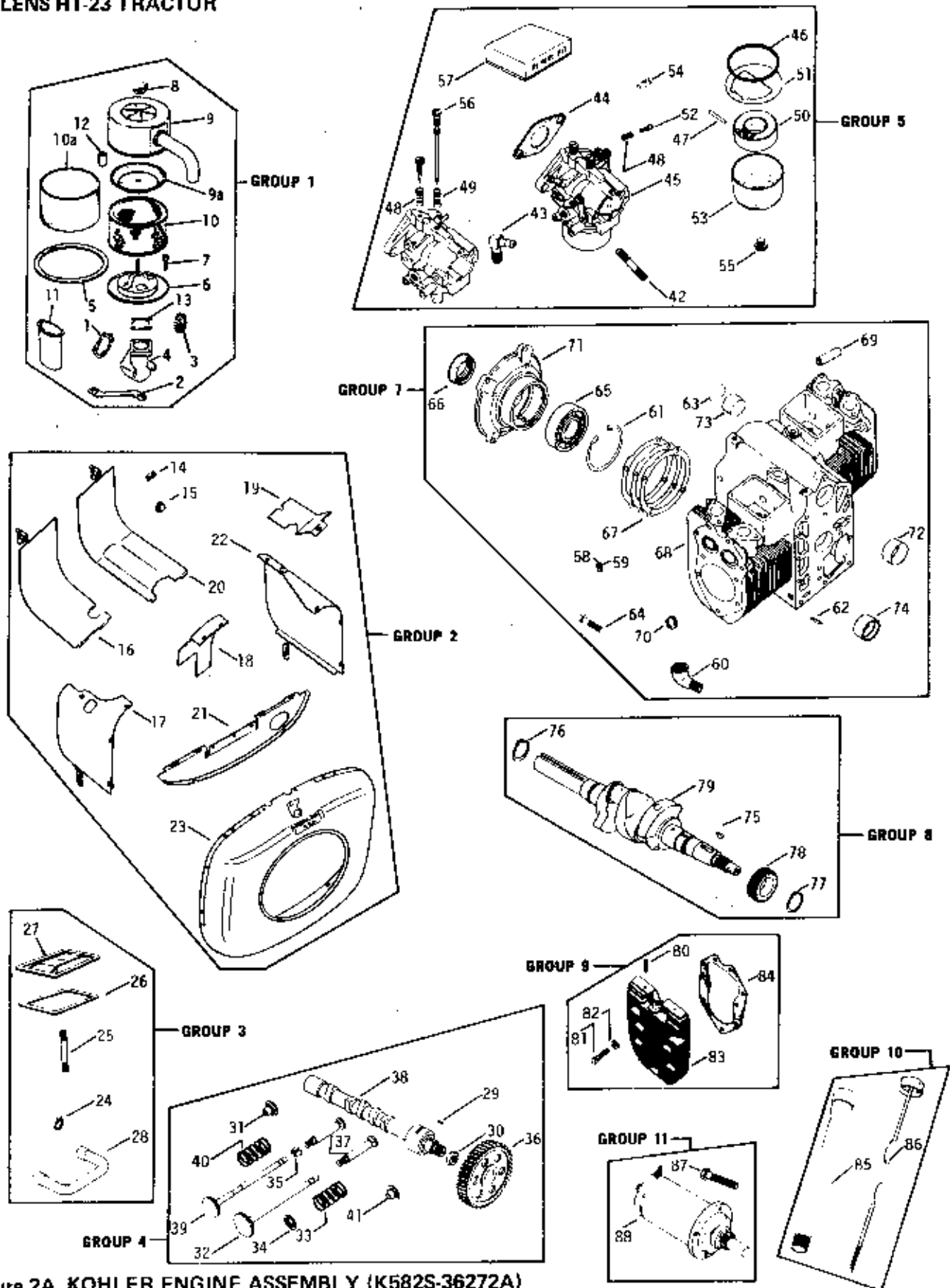


Figure 2A KOHLER ENGINE ASSEMBLY (K582S-36272A)  
 KOHLER ENGINE ASSEMBLY (K582S-36328)

## ORDER PARTS FROM YOUR LOCAL KOHLER ENGINE DEALER

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
<u>AIR INTAKE - GROUP 1</u>				45	48 053 06	Carburetor - assembly	
1	277069	Gasket, elbow		46	200375	Gasket, bowl	
2	277116	Brace, elbow		47	200376	Pin, float lever (2)	
3	48 162 05	Screen (A)		48	200380	Spring, thr. lever (2)	
4	48 054 01	Elbow, air cleaner		49	200383	Spring, idle needle	
5	237423	Seal, cover		50	25 757 03	Float Kit	
6	48 094 03	Base, air cleaner (A)		51	25 041 02	Gasket, bowl	
	47 094 04	Base, air cleaner (B)		52	234945	Screw, idle speed adj.	
7	X-167-2	Screw (4)		53	235448	Bowl	
8	X-276-7	Nut, wing		54	48 755 10	Kit, clamp	
9	52 254 11	Cover, air cleaner snorkel		55	47 190 06	Nut, bowl	
9a	52 082 04	Cover, air cleaner		56	48 103 01	Needle, hi-speed	
10	45 083 02	Element, air cleaner		57	25 757 02	Kit, repair	
10a	52 083 02	Precleaner (A)		<u>CRANKCASE - GROUP 7</u>			
	45 083 01	Precleaner (B)		58	X-75-23	Plug, pipe 1/8 H. socket (3)	
11	47 134 02	Tube (A)		59	X-75-31	Plug, pipe	
12	47 032 03	Seal		60	X-211-10	Elbow	
13	277093	Gasket		61	X-269-31	Ring, retaining	
<u>BAFFLES &amp; SHROUD - GROUP 2</u>				62	X-599-2	Pin (2)	
14	X-301-8	Button, plug		63	160037	Plug, welch 1-1/2	
15	243035	Grommet		64	270956	Screw, H.C. 3/8-16x1-1/4 (4)	
16	277048	Baffle, #1 barrel		65	277062	Bearing, ball	
17	277051	Baffle, #1 cylinder head		66	277065	Seal, rear oil	
18	277054	Baffle, #1 upper cylinder		67	277087	Gasket, closure plate	
19	48 063 01	Baffle		68	48 005 06	Crankcase - assembly (USE: 48 522 23 Shortblock)	
20	277168	Baffle, #2 barrel		69	235007	Guide, valve (4)	
21	277230	Baffle, bl. hsg. support		70	230265	Insert, exhaust valve (2)	
22	48 124 04	Baffle, #2 cylinder head		71	48 009 01	Plate, rear closure	
23	277056	Housing, blower		72	277038	Bushing	
<u>VENT &amp; VALVE COVERS - GROUP 3</u>				73	277039	Bushing	
24	X-426-3	Clamp, hose (2)		74	277208	Bearing	
25	220368	Stud, valve cover (2)		<u>CRANKSHAFT - GROUP 8</u>			
26	270034	Gasket, valve cover (2)		75	X-42-15	Key, woodruff	
27	270036	Cover, valve (2)		76	X-269-30	Ring, retaining	
28	277392	Hose, breather		77	X-269-32	Ring, retaining	
<u>CAMSHAFT &amp; VALVES - GROUP 4</u>				78	277009	Gear, crankshaft	
29	X-43-1	Key, woodruff		79	277659	Crankshaft	
30	X-119-17	Nut, jam 3/4-16		<u>CYLINDER HEAD - GROUP 9</u>			
31	230011	Retainer, valve spr. exh. (2)		80	X-280-13	Pin, roll 3/16x1-1/8 (2)	
32	235008	Valve, intake (2)		81	270158	Screw, H.C. 3/8-16x1-1/2 (18)	
33	235010	Spring, valve intake (2)		82	270889	Washer 3/8 (18)	
34	235011	Retainer, valve spring (4)		83	277043	Head, cylinder (2)	
35	41 755 10	Kit, retainer (4)		84	48 052 01	Gasket, cylinder head (2)	
36	277012	Gear, camshaft		<u>DIPSTICK - GROUP 10</u>			
37	D-277031	Tappet (4)		85	271825	Tube, oil fill	
38	48 012 01	Camshaft		86	277668	Dipstick	
39	48 016 01	Valve exhaust (2)		<u>ELECTRIC START - GROUP 11</u>			
40	235010	Spring, valve exh. (2)		87	X-154-1	Screw, H.C. 5/16-18x7/8 (3)	
41	230011	Retainer, valve spr. intake (2)		88	A-277599	Starter - assembly	
<u>CARBURETOR - GROUP 5</u>							
42	X-352-10	Stud (2)					
43	X-391-1	Elbow					
44	271030	Gasket, carburetor					

(A) KOHLER ENGINE ASSEMBLY (K582S-36272A)  
 (B) KOHLER ENGINE ASSEMBLY (K582S-36328)

# BOLENS HT-23 TRACTOR

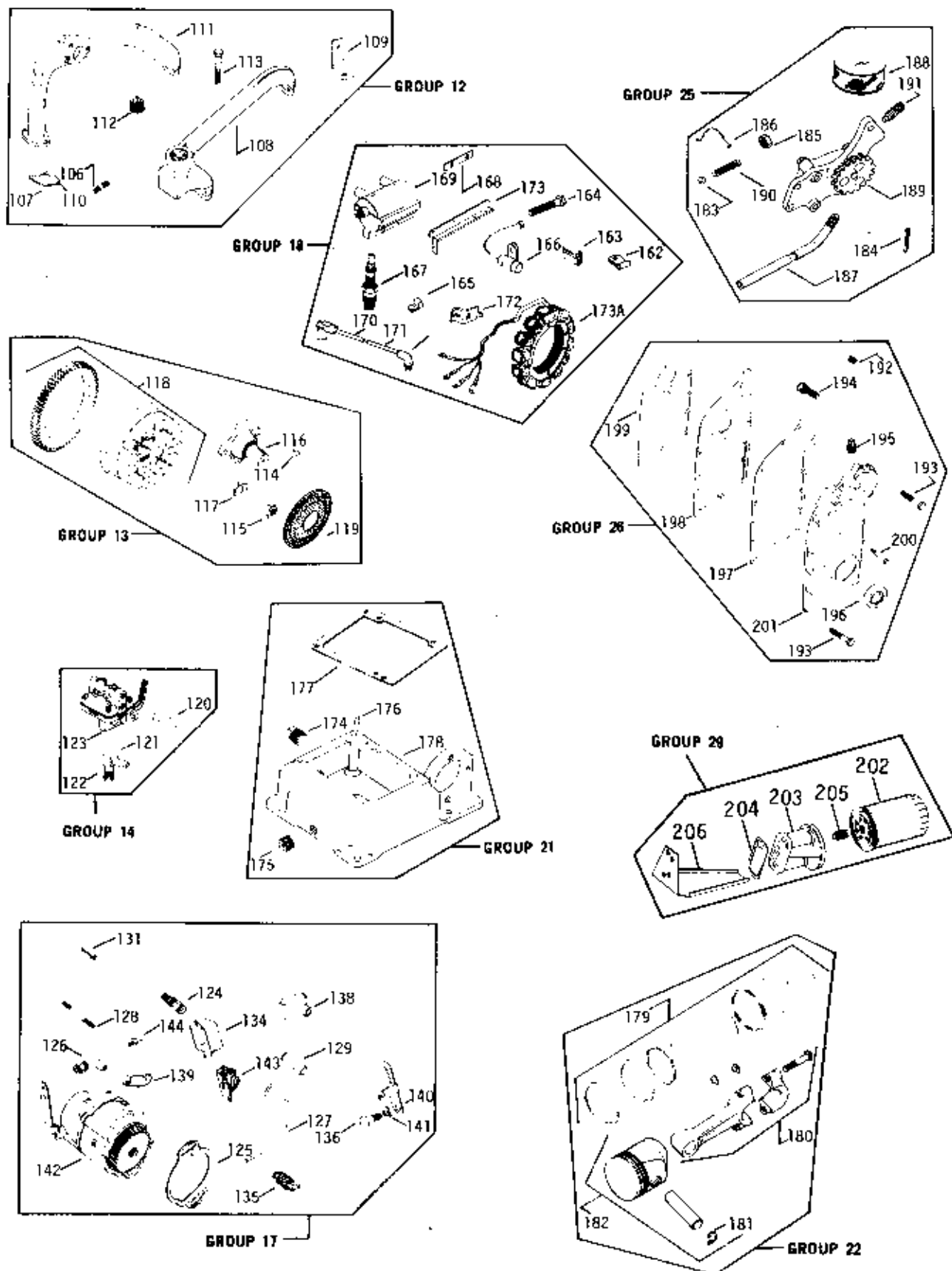


Figure 2A KOHLER ENGINE ASSEMBLY



## ORDER PARTS FROM YOUR LOCAL KOHLER ENGINE DEALER

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
<u>INTAKE &amp; EXHAUST MANIFOLDS - GROUP 12</u>				<u>OIL PAN - GROUP 21</u>			
106	235899	Stud (4)		174	X-75-6	Plug, pipe	
107	277091	Gasket, manifold (2)		175	X-75-18	Plug, pipe	
108	277482	Manifold, exhaust		176	230125	Pin, dowel (2)	
109	47 445 01	Strap, lifting (2)		177	277014	Gasket, oil pan	
110	48 052 02	Gasket, intake (2)		178	48 199 03	Pan, oil	
111	48 164 07	Manifold, intake		<u>PISTON &amp; ROD - GROUP 22</u>			
112	X-75-37	Plug, pipe 1-1/2		179	48 108 05	Ring set - Std. & .003 (2) (Service)	
113	X-125-14	Screw, H.C. 5/16-18x2-3/4			48 108 06	Ring set - .010 (Service)	
<u>FLYWHEEL - GROUP 13</u>					48 108 07	Ring set - .020 (Service)	
114	X-45-3	Key, woodruff			48 108 08	Ring set - .030 (Service)	
115	X-80-1	Nut, hex.		180	48 067 12	Rod, conn. (Std.) (2)	
116	277637	Shaft, front drive			48 067 13	Rod, conn. (.010 U.S.)	
117	277595	Nut, lock		181	235004	Retainer (4)	
118	48 025 14	Flywheel - assembly (Includes magnets & ring gear)		182	48 074 06	Piston - assy. (Std.) (2) (Includes pin & retainers)	
119	48 162 02	Screen, grass			48 074 07	Piston - assy. (.003) (Includes pin & retainers)	
<u>FUEL PUMP - GROUP 14</u>					48 074 08	Piston - assy. (.010) (Includes pin & retainers)	
120	47 041 04	Gasket			48 074 09	Piston - assy. (.020) (Includes pin & retainers)	
121	X-391-1	Connector			48 074 10	Piston - assy. (.030) (Includes pin & retainers)	
122	X-391-11	Connector		<u>OIL PUMP - GROUP 25</u>			
123	47 559 01	Pump, fuel		183	X-212-3	Ball, steel	
<u>GOVERNOR - GROUP 17</u>					184	X-36-6	Pin, cotter
124	X-343	Connector			185	X-629-1	Palnut 1/8-27
125	277078	Gasket, governor housing			186	270085	Clip, oil tube
126	277337	Elbow			187	277201	Tube, oil inlet
127	277669	Line, oil			188	277202	Strainer, oil
128	271151	Rod, throttle			189	48 393 20	Pump, fuel
129	45 208 03	Joint, ball			190	50 089 01	Spring, relief valve
131	X-280-8	Pin, roll			191	277694	Screw, socket set
134	232535	Cover, breaker		<u>GEAR COVER - GROUP 26</u>			
135	271547	Spring, governor		192	X-6-11	Screw, H.C. 5/16-18x3/4 (4)	
136	275691	Screw, shoulder		193	X-6-22	Screw, H.C. 5/16-18x1-3/4 (7)	
138	A-277905	Housing, breather		194	X-55-6	Screw, allen 5/16-18x3/4	
139	277073	Gasket		195	X-75-2	Plug	
140	277080	Lever, throttle		196	X-379-9	Seal, front oil	
141	277341	Washer, tension		197	277020	Gasket, gear cover	
142	B-277112	Governor - assembly		198	277021	Plate, gear cover	
143	47 150 01	Breaker		199	277022	Gasket, gear cover plate	
144	48 194 01	Joint, ball		200	277086	Screw, H.C. 5/16-18x1-3/4 (2)	
<u>IGNITION - GROUP 18</u>					201	277493	Cover, gear
162	270154	Clip, cable (2)		<u>OIL FILTER - GROUP 29</u>			
163	48 155 02	Connector		202	277233	Filter, oil	
164	X-778-1	Screw, H.C. 5/16-8x7/8 (3)		203	48 029 02	Adapter, oil filter	
165	210281	Clip, cable (2)		204	48 041 03	Gasket (2)	
166	230722	Condenser		205	277234	Nipple, oil filter	
167	235041-5	Plug, spark (2)		206	48 459 01	Trough, oil spill	
168	271694	Plate, coil mounting					
169	277375	Coil					
170	48 348 04	Lead, high tension					
171	48 348 03	Lead, high tension					
172	235778	Clamp (2)					
173	48 088 01	Bracket, coil					
173A	47 085 01	Stator					

# BOLENS HT-23 TRACTOR

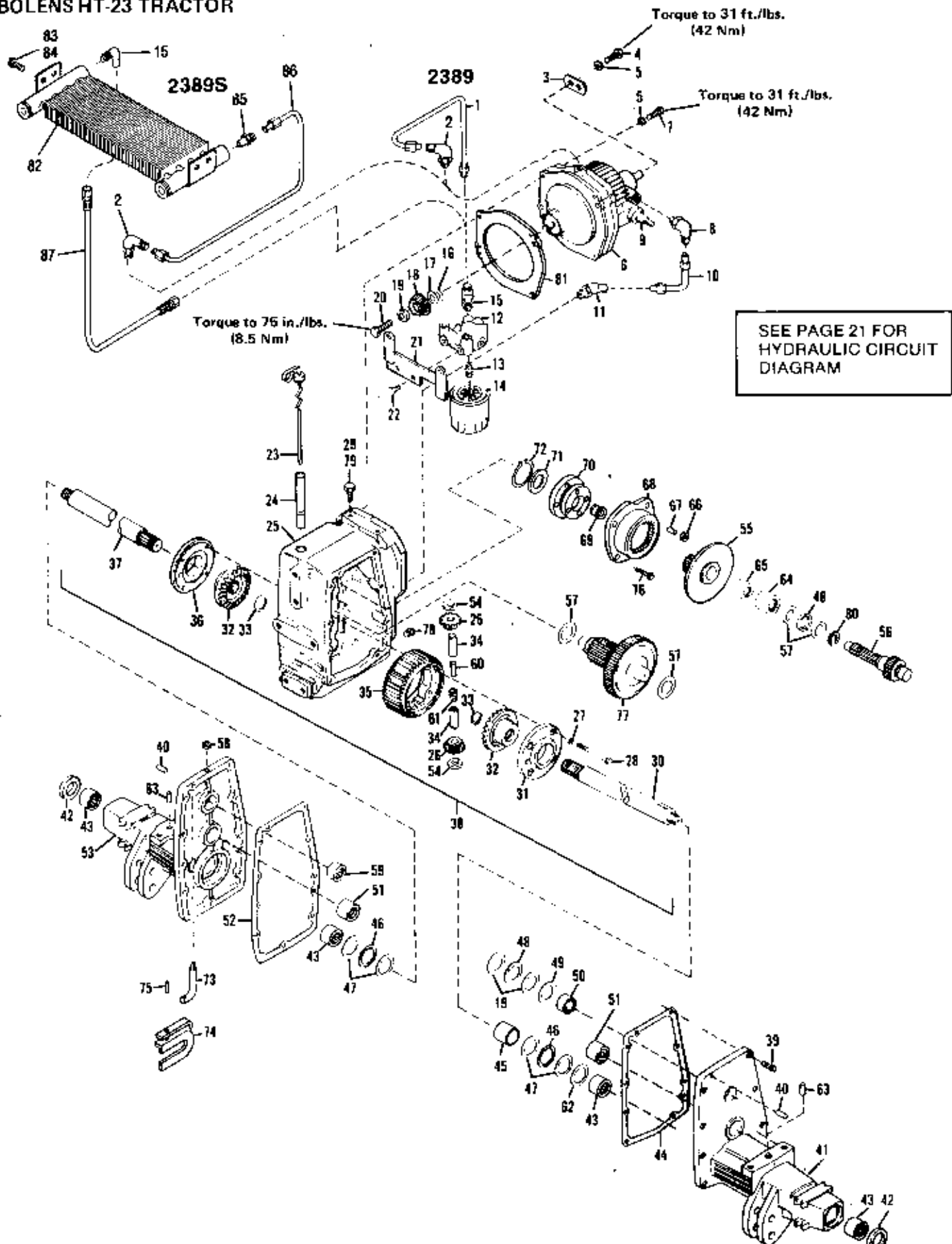


Figure 3 OIL COOLER HYDRO and TRANSAXLE ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	1736236	Tube Ass'y (4)	1	45	1724094	Spacer	1
	1738876	Tube Ass'y (1)	1	46	1186007	Bearing, Roller, Thrust	2
2	1185737	90° Elbow Fitting	1	47	1186006	Race, Thrust	4
3	1734197	Neutral Anchor	1	48	1185764	Bearing, Roller, Thrust	1
4	• 1111614	Hex Screw, 3/8-16 x 3	1	49	1718781	Shim .005	AR
5	• 1100243	Lock Washer, 3/8	4	50	1185774	Bearing Needle (Closed End)	1
6	1736048	R.H. Hydrostatic Package	1	51	1185720	Bearing Needle (Closed End)	2
7	• 1100770	Hex Screw, 3/8-16 x 2-3/4	4	52	1724087	Gasket, Cover, L.H.	1
8	1724390	90° Elbow Fitting	1	53	1738161	Cover, Transaxle Housing, L.H. (Incl. Ref. Nos. 43, 50 & 51)	1
9	1724370	Control Shaft Seal	1	54	*1715301	Thrust Washer	2
10	1734635	Tube Ass'y	1	55	1727735	Bevel Gear, 56T, 24T & 23T	1
11	1732238	45° Elbow	1	56	1734077	Pinion Shaft, 25T	1
12	1736172	Filter Manifold	1	57	1186002	Thrust Race, 1/8	6
13	1721921	Special Coupling	1	58	1729555	Oil Seal	1
14	1726450	Oil Filter	1	59	1186278	Bearing	1
15	1185739	90° Elbow	2	60	1732166	Dowel Pin	1
16	1730375	Shim	AR	61	1734339	Compression Spring	1
17	1730374	Shim	AR	62	1728080	Shim	2
18	1729531	Bevel Pinion, 18T	1	63	1735982	Pin	2
19	1729559	Spacer	1	64	1185721	Bearing	1
20	1741832	Hex Screw, 1/4-20 x 5/8	1	65	1725907	Bearing	1
21	1732230	Filter Bracket	1	66	1725945	Planet Gear	4
22	1186345	Flange Screw, 3/8-16 x 3/4	2	67	1726082	Pin	4
23	1724092	Dip Stick	1	68	1725944	Internal Ring Gear	1
24	1724090	Tube	1	69	1725909	Sliding Gear	1
25	1726046	Housing, Transaxle	1	70	1725942	Planet Carrier	1
26	*1731865	Bevel Pinion, 10T	2	71	1726050	Thrust Washer	1
27	• 1100242	Lock Washer, 5/16	4	72	1186461	Retaining Ring	1
28	1186015	Capscrew, 5/16-18 x 3-1/2 HT.	4	73	1728850	Shifter Shaft	1
29	• 1100243	Lock Washer, 3/8	2	74	1725912	Shifter Plate	1
30	1724076	Axle, R.H.	1	75	1185389	Drive Pin	1
31	1724072	Carrier, Bull Gear, R.H.	1	76	1730012	Screw, Counter Box, 5/16-18 x 1	4
32	1724074	Bevel Gear, 22T	2	77	1733867	Cluster Gear, 16T & 45T	1
33	1185732	Retaining Ring, External	2	78	1185930	Pipe Plug	1
34	1732161	Pinion Shaft	2	79	• 1100046	Capscrew, 3/8-16 x 1	2
35	1724085	Bull Gear, 44T	1	80	1726051	Positioning Ring	1
36	1724071	Carrier, Bull Gear, L.H.	1	81	1720282	Gasket	1
37	1724077	Axle, L.H.	1	82	1735815	Oil Cooler (2389S) (1)	1
38	1736029	Differential Assembly (Incl. Ref. Nos. 26 thru 28 & 30 thru 37)	1	83	• 1186389	Flange Nut (2389S) (1)	4
39	1185771	Capscrew, Counterbore, 3/8-16 x 1	17	84	• 1186308	Flange Screw 1/4-20 x 1/2 (2389S) (1)	4
40	1110189	Dowel Pin, 3/8 x 1	4	85	1721989	Connector (2389S) (1)	1
41	1738162	Cover, Transaxle Housing, R.H. (Incl. Ref. Nos. 43, 50 & 51)	1	86	1738876	Tube Ass'y (2389S) (1)	1
42	1185929	Oil Seal	2	87	1863160	Hose Ass'y (2389S) (1)	1
43	1728081	Bearing, Needle, 1-3/4 O.D.	4	NI	1738157	Trans. Fluid, 1 Gal.	
44	1724086	Gasket, Cover, R.H.	1				

• Common Hardware - Purchase Locally (Grade 5 where applicable)

\*If Assembly Does Not Have Thrust Washers, Install Both Bevel Pinions and Thrust Washers

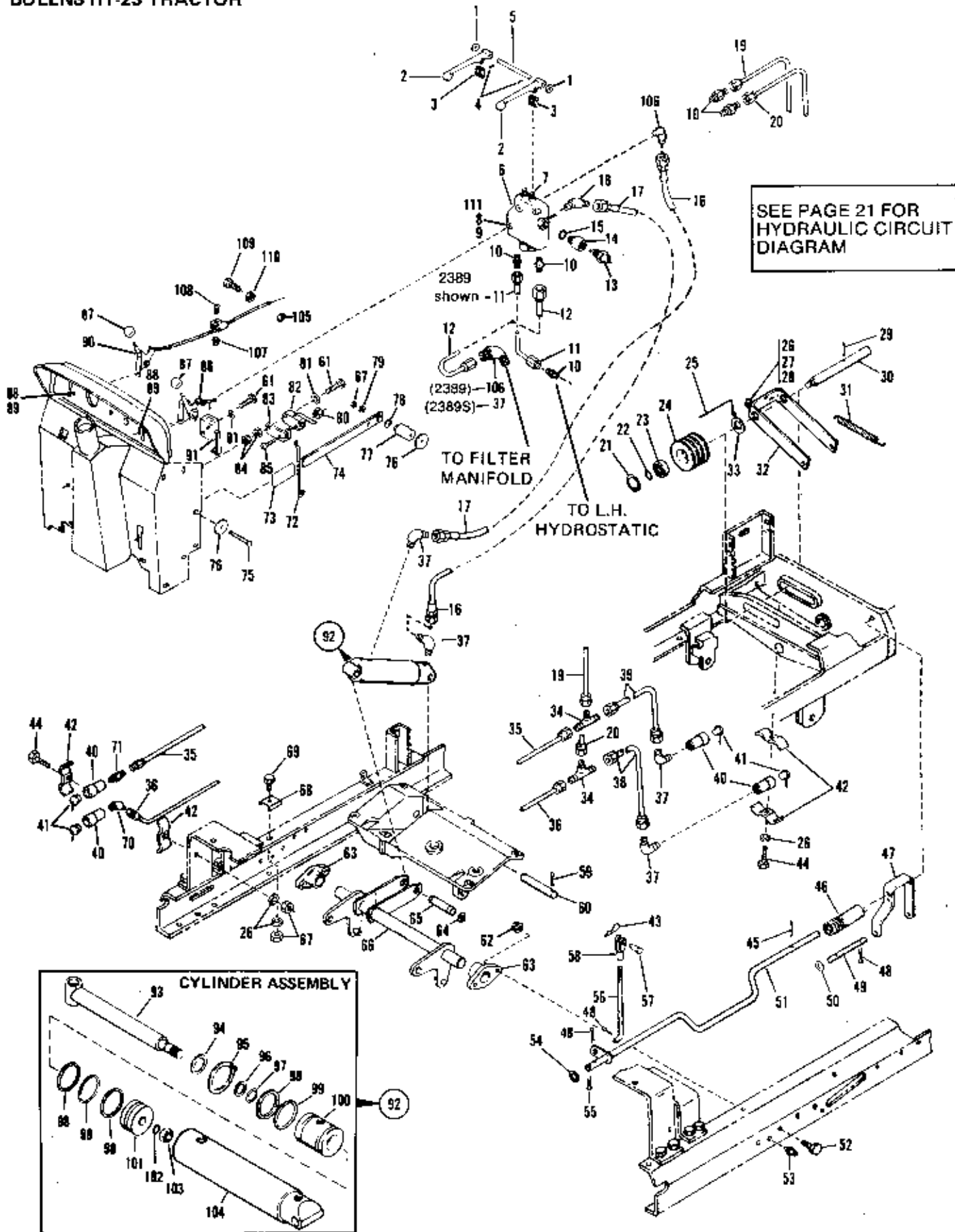


Figure 4 HAND CONTROLS and LIFT ASSEMBLY  
12

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	1107382	Flat Washer, 5/16	2	55	1100356	Cotter Pin, 3/32 x 1	2
2	1722539	Lever, Control Valve	2	56	1724458	PTO Control Rod	1
3	1185018	Link, Connector, 5/8P	2	57	1112587	Clevis Pin	1
4	1100346	Cotter Pin, 3/32 x 3/4	2	58	222007	Clutch Yoke	1
5	1722546	Rod, Control Valve	1	59	1100351	Cotter Pin, 1/8 x 1-1/4	2
6	1734337	Control Valve Assy., 2 Spool	1	60	1724585	Pivot Pin	1
7	1738514	O-Ring Repair Kit (Sesnal)	1	61	1729480	Pan Hd. Screw No. 4-40 x 5/8 (2)	3
	1742238	Repair Kit (Stamped AICO)	1	62	1186393	Flange Lock Nut, 3/8-16	4
	1742239	Repair Kit (Victor Fluid)	1	63	1718593	Block Bearing	2
8	1100241	Lockwasher, 1/4	2	64	1113527	Retaining Ring	2
9	1186229	Nut, 1/4-20	2	65	1724704	Pin, Cylinder Rod	1
10	1717563	Connector	5	66	1724357	Pivot Shaft	1
11	1736173	Return Tube Assv (2389)	1	67	1186230	Nut, 5/16-18	3
	1739370	Tube Assy. (See page 20) (2389S)	1	68	1722867	Clamp, Tubing	1
12	1736174	Pressure Tube Assembly	1	69	1100808	Capscrew, 1/4-20 x 1-1/4	1
13	1750139	Temperature Switch	1	70	1185903	Elbow, 45°	1
14	1750327	Plug, Adapter	1	71	1721989	Connector	1
15	1185773	O-Ring (1) (2)	1	72	1726345	Control, Switch	1
16	1719179	Cylinder Hose Assembly	1	73	1736688	Handle Grip	1
17	1719178	Cylinder Hose Assembly	1	74	1723304	PTO Lever	1
18	1185902	Elbow, 45°	1	75	1111609	Capscrew, 5/16-18 x 2-3/4	1
19	1722700	Tube Assembly, 37° Flared	1	76	1186033	Special Washer	2
20	1722701	Tube Assembly, 37° Flared	1	77	1723302	PTO Lever Support	1
21	1187439	Retaining Ring, Internal	1	78	1701411	Bowed Washer	1
22	1118809	Retaining Ring, External	1	79	1708268	Washer	1
23	1185064	Ball Bearing	1	80	1726432	Lock Nut, No. 4-40	1
24	1719202	Idler Sheave	1	81	1726140	Speed Nut, Push On (1)	3
25	1718606	Belt Guide	1	82	1725550	PTO Switch	1
26	1100242	Lockwasher, 5/16	4	83	1726346	Bracket, Switch	1
27	1103195	Capscrew, 5/16-18 x 5/8	1	84	1186225	Nut, No. 6-32	2
28	1107382	Flat Washer, 5/16	1	85	1729480	Mach. Screw, No. 4-40 x 5/8	1
29	1185376	Roll Pin, 3/16 x 1-1/2	1	86	1730850	Throttle Control	1
30	1718567	Idler Shaft	1	87	1724527	Knob Only	2
31	1703615	Extension Spring	1	88	1116287	Mach. Screw, No. 10-24 x 5/8	4
32	1718616	Idler Shaft Bail	1	89	1185985	Nut, No. 10-24	4
33	1107387	Flat Washer, 3/4	1	90	1723312	Choke Control	1
34	1185904	Tee	2	91	1728198	Switch	1
35	1722696	Tube Assembly, 37° Flared	1	92	1724520	Cylinder (Incl. Nos. 93 thru 104)	1
36	1722697	Tube Assembly, 37° Flared	1	93	1724512	Piston Rod Assembly	1
37	1185739	Elbow, 90°	5	94	1185268	Oil Seal	1
38	1722698	Tube Assembly, 37° Flared	1	95	1118735	Snap Ring	1
39	1722699	Tube Assembly, 37° Flared	1	96	1186019	Ring Washer	1
40	1717627	Coupling, Body	4	97	1177395	O-Ring	1
41	1720733	Plug, Dust	4	98	1186018	Ring Washer	3
42	1722560	Clamp, Coupling	4	99	1186017	O-Ring	2
43	1703011	Pin, Hairspring	1	100	1724511	Cylinder Head	1
44	1111607	Capscrew, 5/16-18 x 2-1/4	2	101	1724515	Piston	1
45	1185552	Drive Pin, 3/16 x 1-3/4	1	102	1177509	O-Ring	1
46	1722565	Torsion Spring	1	103	1110154	Lock Nut, 5/8-18	1
47	1718528	Control Arm	1	104	1724516	Cylinder Tube	1
48	1100346	Cotter Pin, 3/32 x 3/4	4	105	1186243	Nut, Jam, 1/4-28	2
49	1718533	Arm Pin	1	106	1185737	Elbow, 90° (2389)	1
50	1107383	Flat Washer, 3/8	2	107	1185869	Keps Nut, No. 8-32	2
51	1722564	Control Rod	1	108	1110672	Rd. Hd. Screw, No. 8-32 x 5/8	2
52	1186349	Fl Lock Screw, 3/8-18 x 1-1/2	4	109	1805169	Screw, Spec., 1/4-28 x 3/4	2
53	1185976	Grease Fitting	2	110	1110148	Nut, Hex, 1/4-28	2
54	1107386	Flat Washer, 1/2	2	111	1100807	Capscrew, 1/4-20 x 2	2

Model 2389 (1) Serial Number 0100101 thru 0199999  
(2) Serial Number 0200101 thru 0299999

Model 2389S (1)

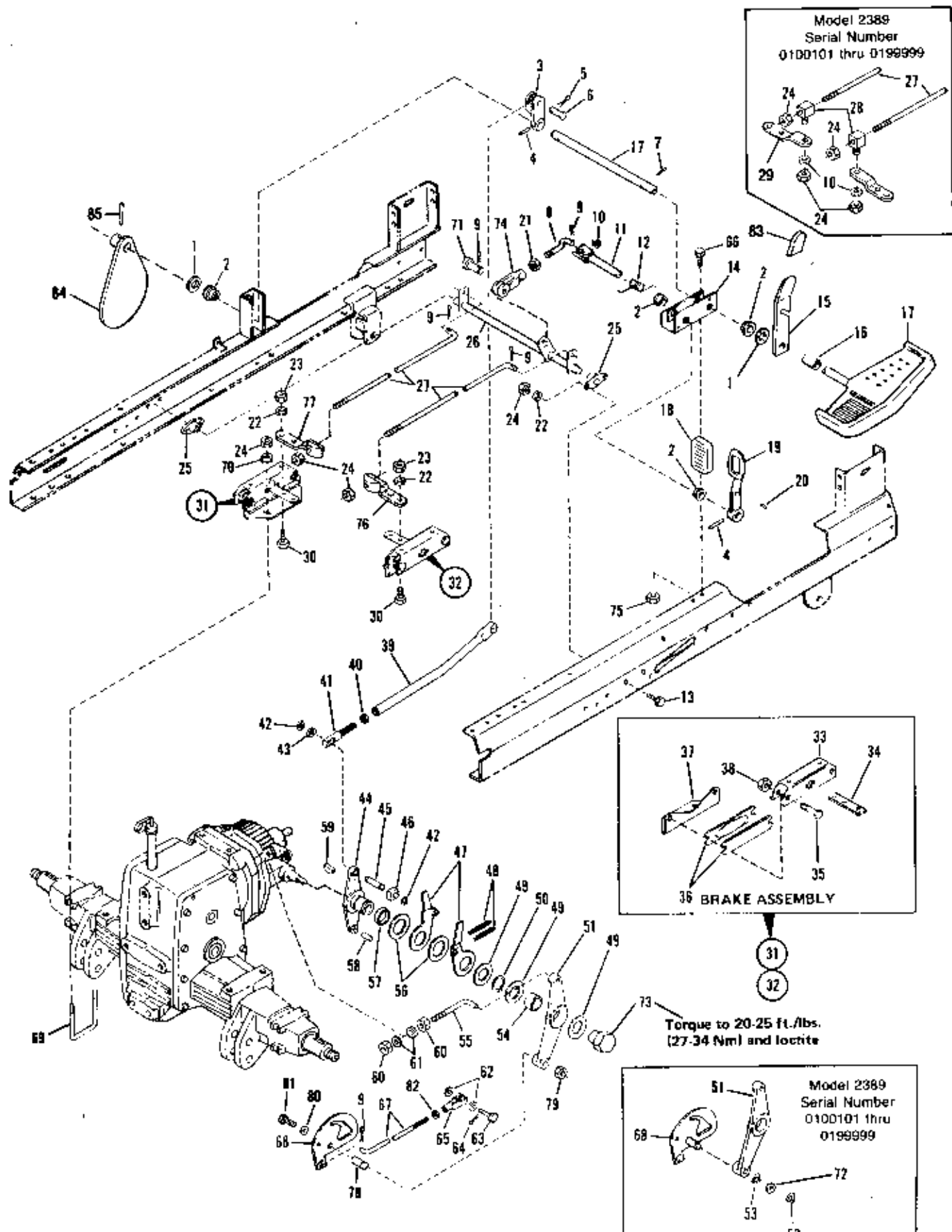


Figure 5 BRAKE and HYDRO CONTROL ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	1706594	Washer . . . . .	2	43	1890948	Flat Washer . . . . .	2
2	1734160	Flange Bushing . . . . .	4	44	1732391	Speed Control Arm . . . . .	1
3	1736109	Control Arm. . . . .	1	45	1724445	Control Pin . . . . .	1
4	1713432	Drive Pin, 1/16 x 1-1/4. . . . .	2	46	1720699	Cushion Block . . . . .	1
5	• 1100350	Cotter Pin, 1/8 x 1. . . . .	1	47	1725359	Neutralizer Arm . . . . .	2
6	1724632	Clevis Pin, 1/2 x 1-1/4 . . . . .	1	48	1724582	Extension Spring. . . . .	2
7	• 1100351	Cotter Pin, 1/8 x 1-1/4. . . . .	1	49	1720529	Thrust Washer. . . . .	3
8	1732226	Tie Rod. . . . .	1	50	1185732	Retaining Ring, External. . . . .	1
9	• 1100346	Cotter Pin, 3/32 x 3/4 . . . . .	5	51	1735998	Neutral Stop Arm (1). . . . .	1
10	• 1107383	Flat Washer, 3/8 . . . . .	3		1740057	Neutral Stop Arm (2)(3) . . . . .	1
11	1724434	Brake Arm Assembly . . . . .	1	52	1118804	Retaining Ring (2)(3) . . . . .	1
12	1724453	Torsion Spring . . . . .	1	53	1706782	Wave Washer (1) . . . . .	1
13	• 1100088	Capscrew, 3/8-16 x 1/2. . . . .	6	52	1118804	Retaining Ring . . . . .	1
14	1724569	Support Assembly, Control Shaft . . . . .	1	53	1706782	Wave Washer. . . . .	1
15	1736199	Latch Ass'y, Brake (1) . . . . .	1	54	1732833	Bearing . . . . .	1
	1739869	Latch Ass'y, Brake (2)(3) . . . . .	1	55	1732189	Rod, Neutral Adjuster . . . . .	1
16	1721378	Spacer (1) . . . . .	1	56	1720361	Thrust Washer. . . . .	2
	1739868	Spacer (2)(3). . . . .	1	57	1720706	Bearing . . . . .	1
17	1732323	Speed Control Pedal. . . . .	1	58	1110187	Dowel Pin . . . . .	1
18	1725518	Pedal Pad. . . . .	1	59	1104435	Woodruff Key. . . . .	1
19	1724437	Brake Pedal . . . . .	1	60	• 1186232	Nut, 7/16-14 . . . . .	2
20	1120209	Roll Pin, 3/16 x 3/4. . . . .	1	61	• 1100265	Flat Washer, 1/4 . . . . .	2
21	1186245	Nut, 3/8-24 . . . . .	1	62	• 1107382	Flat Washer, 5/16 . . . . .	2
22	• 1100243	Lockwasher, 3/8 . . . . .	8	63	1705602	Clevis Pin, 5/16 x 1-1/16. . . . .	1
23	• 1186231	Nut, 3/8-16 . . . . .	4	64	• 1100349	Cotter Pin, 1/8 x 3/4 . . . . .	1
24	• 1110108	Lock Nut, 3/8-16 . . . . .	10	65	1710583	Rod End . . . . .	1
25	1724457	Flange Bearing . . . . .	2	66	• 1100068	Capscrew, 3/8-16 x 3/4. . . . .	2
26	1724440	Shaft Assembly, Transfer . . . . .	1	67	1735995	Rod, Lock Plate Control (1) . . . . .	1
27	1724461	Brake Rod . . . . .	2		1742097	Rod, Lock Plate Control (2)(3) . . . . .	1
28	1724459	Swivel (1) . . . . .	2	68	1735994	Lock Plate Assembly (1). . . . .	1
29	1724460	Arm, Brake Extension (1). . . . .	2		1740062	Lock Plate Assembly (2)(3) . . . . .	1
30	• 1100046	Capscrew, 3/8-16 x 1 . . . . .	4	69	1724468	U-Bolt, 3/8-16 . . . . .	2
31	1724580	Brake Assembly, L.H. (Incl. Ref. Nos. 33 thru 38). . . . .	1	70	1185715	Lockwasher, 3/8 Pyramid . . . . .	2
32	1724599	Brake Assembly, R.H. (Incl. Ref. Nos. 33 thru 38). . . . .	1	71	1112587	Clevis Pin. . . . .	1
33	1724587	Bracket, Secondary . . . . .	1	72	1890234	Flat Washer (1) . . . . .	1
34	1724588	Lever, Actuating . . . . .	1	73	1730087	Hydro Control Nut . . . . .	1
35	1724590	Bolt . . . . .	2	74	222007	Yoke. . . . .	1
36	1724589	Stator Plate . . . . .	2	75	1186393	Flange Nut 3/8-16. . . . .	2
37	1724473	Support, Brake . . . . .	1	76	1742105	RH Arm Ext. (2)(3) . . . . .	1
38	1724591	Lock Nut. . . . .	2	77	1742104	LH Arm Ext. (2)(3) . . . . .	1
39	1732184	Control Rod. . . . .	1	78	1732369	Spacer (2)(3). . . . .	1
40	• 1186261	Jam Nut, 1/2-13 . . . . .	1	79	1185506	Self Lock Nut, 3/8-16 (2)(3) . . . . .	1
41	1724446	Rod End . . . . .	1	80	1701055	Flat Washer, 3/8 (2)(3) . . . . .	1
42	1185219	Retaining Ring, External. . . . .	2	81	• 1100086	Hex Screw 3/8-16 x 1-3/4 (2)(3) . . . . .	1
				82	1186244	Hex Nut, 5/16-24 . . . . .	1
				83	1728696	Grip (2)(3) . . . . .	1
				84	1741778	Disk Ass'y (3) . . . . .	1
				85	1120210	Drive Pin 3/16 x 1 (3) . . . . .	1

• Common Hardware - Purchase Locally (Grade 5 where applicable)

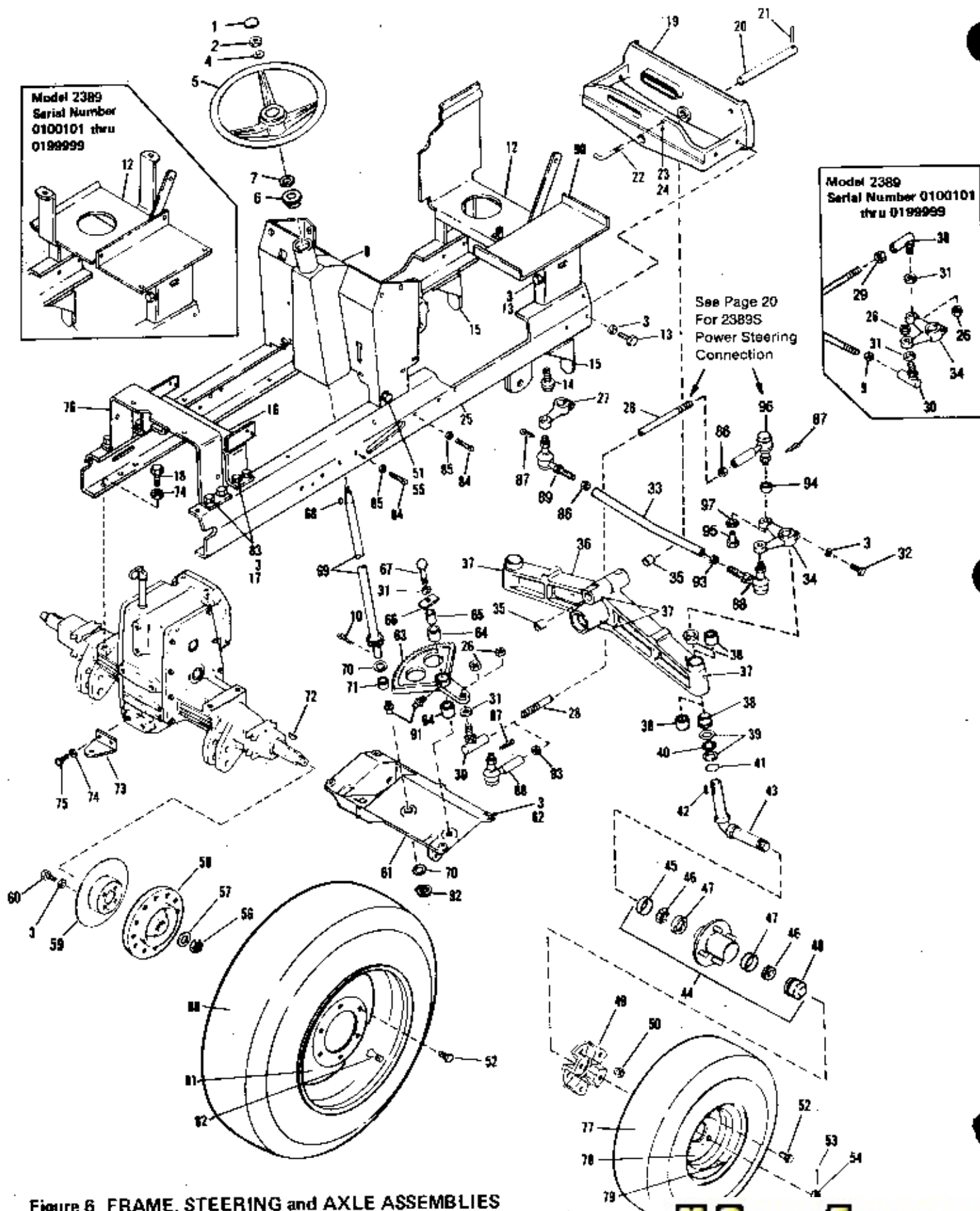
Model 2389

(1) Serial Number 0100101 thru 0199999  
(2) Serial Number 0200101 thru 0299999

Model 2389S

(2) Serial Number 0100101 thru 0199999  
(3) Serial Number 0200101 thru 0299999

# BOLENS HT-23 TRACTOR





REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D
1	1748382	Steering Wheel Cap	1
2	• 1110108	Nut, 3/8-18	1
3	• 1100243	Lockwasher, 3/8	30
4	• 1107383	Flat Washer, 3/8	1
5	1738880	Steering Wheel	1
6	1720134	Bearing, Self-Aligning	1
7	1708012	Washer	AR
8	1734590	Steering Column (1) (2)	1
	1749861	Steering Column (3) (4)	1
9	1185082	Nut, 5/8 (1)	1
10	• 1100351	Cotter Pin, 1/8 x 1-1/4	1
11	1736010	Frame, L.H. (1) (2)	1
	1749859	Frame, L.H. (3) (4)	1
12	1722881	Supp. Batt. and Gas Tank (1)	1
	1737297	Supp. Batt. and Gas Tank (2) (3) (4)	1
13	• 1100068	Capscrew, 3/8-16 x 3/4	8
14	1188345	Flange Screw, 3/8-16 x 3/4	4
15	1743305	Stop Assembly	2
16	1724465	Support, Trans. (2389)	1
	1737716	Support, Trans. (2389S)	1
17	• 1100913	Capscrew, 3/8-16 x 7/8	8
18	• 1100054	Capscrew, 1/2-13 x 1	4
19	1722832	Support Axle (1)	1
	1742019	Support Axle (2) (3) (4)	1
20	1718548	Pin, Axle Pivot (1)	1
	1742013	Pin, Axle Pivot (2) (3) (4)	1
21	1185376	Roll Pin, 3/16 x 1-1/2	2
22	1719147	Beil Guide	1
23	• 1100241	Lock Washer, 1/4	1
24	• 1186229	Nut, 1/4-20	2
25	1736012	Frame, R.H.	1
26	1185082	Lock Nut, 5/8-18 (1)	4
	1120103	Castle Nut, 3/8-24 (2)	4
27	1718513	Steering Arm, L.H. (1)	1
	1742014	Steering Arm, L.H. (2) (3) (4)	1
28	1742156	Drag Link	1
29	1185216	Nut, 5/16-18 (1)	1
30	1719003	Ball Joint (1)	4
31	• 1100247	Lockwasher, 5/8	7
32	• 1100011	Capscrew, 3/8-24 x 1-1/2	2
33	1741951	Tie Rod	1
34	1718502	Steering Arm, R.H. (1)	1
	1742015	Steering Arm, R.H. (2)	1
	1752032	Steering Arm, R.H. (3) (4)	1
35	1185812	Sleeve Bearing (1)	2
36	1718802	Front Axle (1)	1
	1742018	Front Axle (2) (3) (4)	1
37	1185978	Grease Fitting	4
38	1185728	Flange Bearing (1)	4
	1187181	Needle Bearing (2) (3) (4)	4
39	1185730	Thrust Race	4
40	1185729	Thrust Bearing	2
41	1185988	O-Ring	2
42	1104338	Square Key, 1/4 x 1	2
43	1723468	Spindle Assembly (1)	2
	1742012	Spindle Assembly (2) (3) (4)	2
44	1730406	Wheel Hub Assembly (Incl. Ref. No. 45 thru 48) (1)	2
	1723110	Wheel Hub Assembly (Incl. Ref. No. 45 thru 48) (2) (3) (4)	2
45	1719801	Flat Seal	2
46	1185661	Cone, Roller Bearing	4
47	1185660	Cup, Roller Bearing	4
48	1719599	Cap	2
49	* 1723082	Wheel Spacer (Optional)	2

\* Optional

• Common Hardware - Purchase Locally

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D
50	1724322	Wheel Nut	8
51	• 1103195	Capscrew, 5/16-18 x 5/8	4
52	1715428	Wheel Bolt, 1/2-20	12
53	• 1104222	Cotter Pin, 3/16 x 1-1/2	2
54	1185758	Castle Nut, Special 1-1/4	2
55	1177548	Shakeproof Washer	4
56	1120390	Lock Nut, 3/4-10	2
57	1708599	Flat Washer	2
58	1724089	Wheel Hub	2
59	1724478	Disc Brake	2
60	• 1100048	Capscrew, 3/8-16 x 1	8
61	1724526	Steering Bridge (1)	1
	1742017	Steering Bridge (2) (3) (4)	1
62	• 1100046	Capscrew, 3/8-16 x 1	4
63	1718506	Gear, 23T (1)	1
	1742016	Gear, 23T (2) (3) (4)	1
64	1185711	Bronze Bearing (1)	1
	1185007	Needle Bearing (2) (3) (4)	1
65	1718555	Spacer (1)	1
	1743389	Spacer (2) (3) (4)	2
66	1721405	Steering Plate	1
67	1107064	Capscrew, 5/8-11 x 2	1
68	1104436	Woodruff Key, 3/16 x 3/4	1
69	1718588	Steering Shaft (1)	1
	1742009	Steering Shaft (2) (3) (4)	1
70	1707546	Thrust Washer	2
71	1185319	Bronze Bearing (1)	1
	1185010	Needle Bearing (2) (3) (4)	1
72	1187255	Woodruff Key, 5/16 x 1-1/4	2
73	1724416	Drawbar	1
74	• 1100245	Lockwasher, 1/2	6
75	• 1100055	Capscrew, 1/2-13 x 1-1/4	2
76	1736008	Support, Fender	1
77	1732925	Tire, 18 x 8.50-8 (Softrac)	2
	1735720	Inner Tube (Opt.)	AR
78	1723115	Wheel	2
79	1718086	Valve	2
80	1732924	Tire, 23 x 12-12 (Softrac)	2
	1734132	Inner Tube (Optional)	AR
81	1718277	Wheel	2
82	1718242	Valve	2
83	• 1186231	Hex Nut, 3/8-16	8
84	1103514	Set Screw, 3/8-16 x 1-1/2	2
85	• 1186259	Nut, Jam, 3/8-16	2
86	1186030	Jam Nut, LH Thd. 1/2-20 (2)	2
87	• 1100346	Cotter Pin, 3/32 x 3/4 (2) (3) (4)	3
88	1724656	R.H. Socket (2) (3) (4)	2
89	1724657	L.H. Socket (2)(3)(4)	2
90	1742082	Battery Locator (2) (3) (4)	1
91	1185976	Grease Fitting (2) (3) (4)	2
92	1113527	Retaining Ring (2) (3) (4)	1
93	1186247	Jam Nut 1/2-20 (2) (3) (4)	2
94	1750409	Spacer (2)(3)	1
	1751563	Spacer (4)	1
95	1750410	Special Nut (2)(3)	1
	1751564	Special Nut (4)	1
96	1751517	L.H. Socket (4)	1
	1724657	L.H. Socket (2)(3)	1
97	1103997	Lock Washer 3/4 (4)	1
	1100247	Lock Washer 5/8 (2)(3)	1

## Model 2389

(1) Serial Number 0100101 thru 0199999

(2) Serial Number 0200101 thru 0299999

## Model 2389S

(2) Serial Number 0100101 thru 0199999

(3) Serial Num

(4) Serial Num

# BOLENS HT-23 TRACTOR

IGNITION SWITCH  
VIEWED FROM  
THE REAR

POSITION 1



OFF

POSITION 2

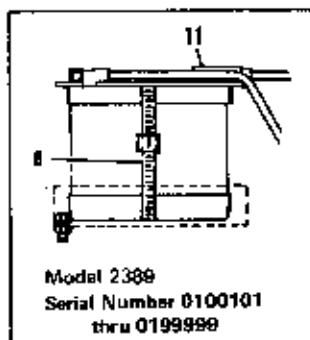
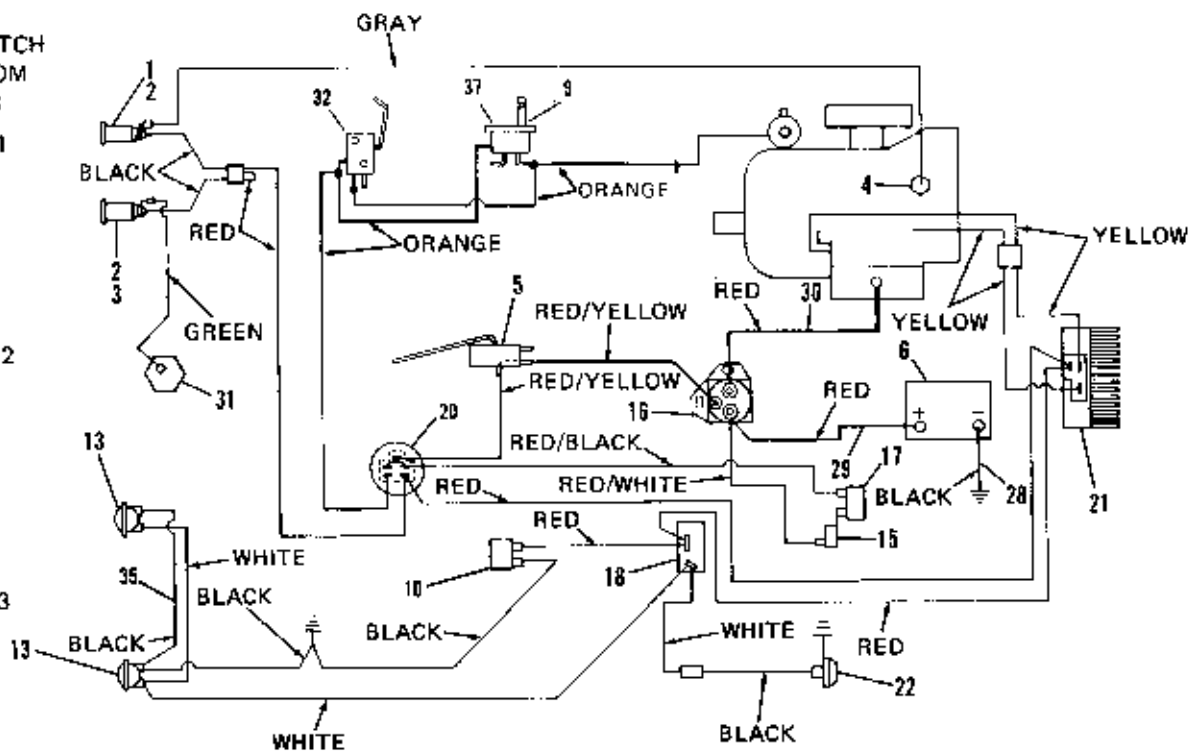


X-Y, B-A  
RUN

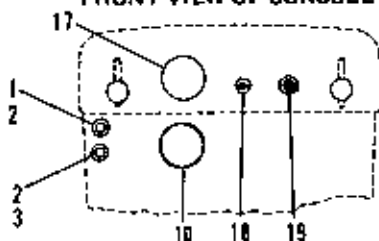
POSITION 3



X-Y, S-B  
START



FRONT VIEW OF CONSOLE



REAR VIEW OF CONSOLE

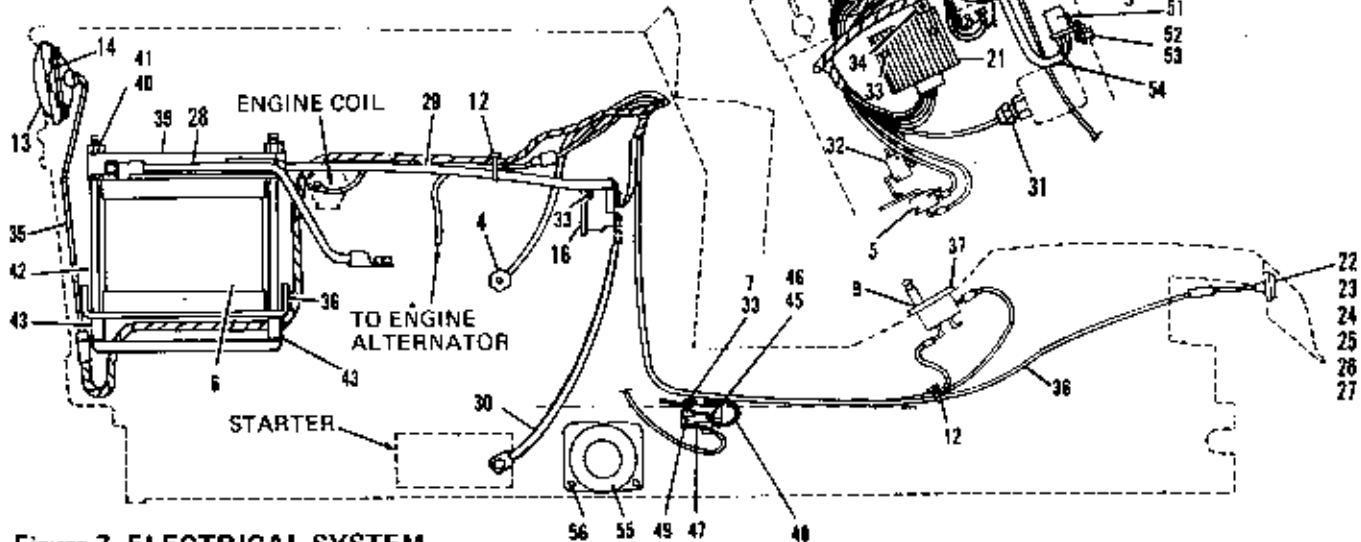
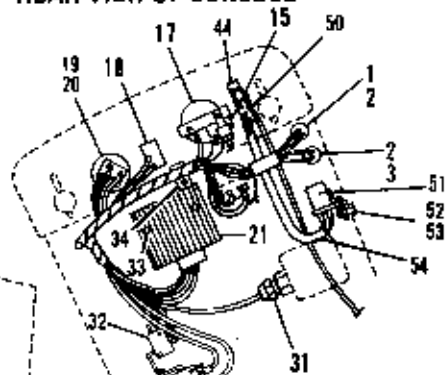


Figure 7 ELECTRICAL SYSTEM

REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.	REF. NO.	PART NO.	DESCRIPTION	NO. REQ'D.
1	1734826	Oil Indicator Lamp (Incl. Ref. No. 2) (1) . . . . .	1	24	1805110	Tail Light Lens . . . . .	1
	1734824	Oil Indicator Lamp (Incl. Ref. No. 2) (2)(3) . . . . .	1	25	1116197	Machine Screw, No. 6-32 x 1/2. . . . .	2
2	**	Bulb (Mfg. No. 1895 R/Red) (1) (2) . . . . .	2	26	1103989	Lockwasher, No. 6. . . . .	2
	1735285	Bulb (GE No. 73) (3) . . . . .	3	27	1186225	Nut, No. 6-32. . . . .	2
3	1734825	Heat Indicator Lamp (Incl. Ref. No. 2) (1) . . . . .	1	28	1722733	Battery Cable, Ground (1) . . . . .	1
	1734824	Heat Indicator Lamp (Incl. Ref. No. 2) (2)(3) . . . . .	1		1736374	Battery Cable, Ground (2)(3) . . . . .	1
4	1726175	Oil Pressure Switch . . . . .	1	29	1722732	Battery Cable, Positive . . . . .	1
5	1725550	Interlock Switch . . . . .	1	30	1722731	Wire, Starter. . . . .	1
6	1751498	Battery . . . . .	1	31	1736315	Temperature Switch. . . . .	1
7	1186308	Flange Screw 1/4-20 1/2 . . . . .	3	32	1728198	Switch. . . . .	1
8	1728136	Clamp (1) . . . . .	1	33	1186389	Flange Nut, 1/4-20 . . . . .	6
9	1734472	Switch Seal . . . . .	1	34	1721252	"J" Clip. . . . .	1
10	1732263	Hour Meter (1) . . . . .	1	35	1727169	Head Light Harness . . . . .	1
	1742197	Hour Meter (2)(3) . . . . .	1	36	1732935	Main Harness (1) . . . . .	1
11	1721413	Terminal Boot . . . . .	1		1741193	Main Harness (2)(3) . . . . .	1
12	1805345	Tie, Cable . . . . .	6	37	1734366	Seat Switch . . . . .	1
13	1726435	Headlight (Mfg. No. 4406-1) . . . . .	2	38	1186389	Flange Nut, 1/4-20 (3) . . . . .	2
14	1806808	Spring, Retainer . . . . .	2	39	1739631	Battery Hold Down (2)(3) . . . . .	1
15	1729914	Circuit Breaker . . . . .	1	40	1107381	Fiat Washer 1/4 (2)(3) . . . . .	2
16	1729547	Solenoid (1) . . . . .	1	41	1734398	Lock Nut 1/4 (2)(3) . . . . .	2
	1740056	Solenoid (2)(3) . . . . .	1	42	1724895	U-Bolt (2)(3) . . . . .	1
17	1725031	Ammeter (1) . . . . .	1	43	1185339	Roll Pin (2)(3) . . . . .	2
	1739205	Ammeter (2)(3) . . . . .	1	44	1750058	Lamp Assembly (3) . . . . .	1
18	1724894	Light Switch. . . . .	1	45	1727777	Speed Nut, #4-40 (3) . . . . .	1
19	1721409	Ignition Switch (Incl. Ref. No. 20) . . . . .	1	46	1729480	Screw #4-40 x 5/8 (3) . . . . .	2
20	1718266	Key Only. . . . .	1	47	1728199	Interlock Switch (3) . . . . .	1
21	1725406	Regulator/Rectifier, 15 Amp . . . . .	1	48	1741910	Ground Lead (3) . . . . .	1
22	1805342	Tail Light Assembly (Incl. Ref. No. 23) . . . . .	1	49	1741779	Switch Bracket (3) . . . . .	1
23	**	Bulb (Mfg. No. 1895) . . . . .	1	50	1732374	Toggle Switch (3) . . . . .	1
				51	1745666	Relay (3) . . . . .	1
				52	1100115	Screw #10-24 x 1/2 (3) . . . . .	2
				53	1185460	Lock Nut #10-24 (3) . . . . .	2
				54	1741958	Harness (3) . . . . .	1
				55	1738462	Clutch (3) . . . . .	1
				56	1738463	Screw, Sems #12-24 x 1/2 (3) . . . . .	2

• Common Hardware - Purchase Locally (Grade 5 where applicable)

\*\*Not Stocked. Purchase from your local automotive or electrical supplier

#### Model 2389

(1) Serial Number 0100101 thru 0199999

(2) Serial Number 0200101 thru 0299999

#### Model 2389S

(2) Serial Number 0100101 thru 0199999

(3) Serial Number 0200101 thru 0499999

Model 2389 (S/N 0200101 - 0299999)

